

REMARKS/ARGUMENTS

Reexamination of the captioned application is respectfully requested.

A. SUMMARY OF THIS AMENDMENT

By the current amendment, Applicants basically:

1. Editorially amend the specification.
2. Amend claim 1 to include all limitations of dependent claim 2.
3. Cancel claim 2 without prejudice or disclaimer.
4. Amend dependent claim 4 to be dependent upon independent claim 1.
5. Respectfully traverse all prior art rejections (see Remarks Section B infra).
6. Respectfully traverse the objection to the drawings (see Remarks Section C infra).
7. Advise the Examiner of a separate submission of an Information Disclosure Statement (IDS).

B. PATENTABILITY OF THE CLAIMS

Claims 1 and 3-4 stand rejected under 35 USC 102(a) as being anticipated by U.S. Patent 6,617,727 to Iwasa et al. Claim 2 stands rejected under 35 USC 103(a) as being unpatentable over U.S. Patent 6,617,727 to Iwasa et al in view of U.S. Patent 6,640,948 to Shirataki et al. All prior art rejections are respectfully traversed for at least the following reasons.

Amended claim 1 requires (a) a first one-way clutch for transmitting the rotational power of a pulley to a shaft and a second one-way clutch for transmitting the rotational power of a motor's rotor to the shaft. The first one-way clutch has an engagement cam-surface in an outer periphery of its inner ring and an engagement cylindrical surface in an inner periphery of its outer ring. The second one-way clutch has an engagement cam-

surface in an inner periphery of its outer ring and an engagement cylindrical surface in an outer periphery of its inner ring.

According to independent claim 1, the second one-way clutch (a motor's roller side one way clutch) has a cam surface at the inner periphery of the outer ring, and the rollers of the second one-way clutch are allowed to freely move along the corresponding outer ring cam surface by the centrifugal force acting on the rollers. That is, there occurs a reduced friction between the rollers and the inner ring. Therefore, the rollers can easily be kept in a free state, and heat generation in grease is suppressed.

In the first one-way clutch (a pulley side, one-way clutch), even if a centrifugal force is exerted on the rollers, the rollers do not easily move along the outer ring. This is because, e.g., the first one-way clutch has a cylindrical surface at the inner periphery of the outer ring. Therefore, it is easy to maintain the first one-way clutch in a locked state.

Independent claim 1 has an advantageous effect that, in order to transmit the rotational power of the pulley to the shaft, the pulley-side, first one-way clutch (which has a long locked time) easily keeps its locked state even during a high speed rotation. On the other hand, the motor's rotor side, second one-way clutch, which has a long idling time, has a reduced heat generation in grease even during a high speed rotation, so that long life of the power transmission device is achieved.

Iwasa merely teaches a power transmission device whose pulley-side and motor's rotor-side one-way clutches each have a cam surface at the corresponding inner ring.

Shirataki merely teaches a single one-way clutch that has a cam surface at the outer ring.

Neither Iwasa nor Shirataki gives a hint for using the Shirataki's one-way clutch for only the pulley-side one-way clutch (first one-way clutch) of Iwasa. Thus, even if Shirataki were properly combined with Iwasa, those skilled in the art would have replaced both of the one-way clutches of Iwasa with the Shirataki's one-way clutch. In other words, neither Iwasa nor Shirataki teaches to use different types of one-way clutches in combination in a power transmission device, much less a combination of (a) a pulley-side, first one-way clutch having an engagement cam-surface in an outer periphery of its inner ring and (b) a motors rotor-side second one-way clutch having an engagement cam-surface in an inner periphery of its outer ring.

C. THE SUFFICIENCY OF THE DRAWINGS

In response to the second enumerated paragraph of the office action, Figures 2 and 3 clearly show the engagement surface (7a) formed at the outer periphery of the inner ring (7) of the first one-way clutch (1). Relevant descriptions can be found in paragraphs 0021 and 0024 of the application. Therefore, it is respectfully requested that the objections to the drawings be withdrawn.

D. INFORMATION DISCLOSURE STATEMENT (IDS)

Submitted electronically herewith on the same date is an Information Disclosure Statement (IDS) calling attention to United States Patent Publication 2004-0178040-A1 which concerns United States Patent Application Serial No. 10/786,472; and United States Patents 7,007,781, 7,143,881; and 7,056,247.

E. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,
NIXON & VANDERHYE P.C.

By: /H. Warren Burnam, Jr./
H. Warren Burnam, Jr.
Reg. No. 29,366

HWB:lsh
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

Information Disclosure Statement (IDS)
also submitted on same date